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**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rule 72.2)

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**IMPORTANT NOTIFICATION**

International application No.  
PCT/JP2003/015884

International filing date (*day/month/year*)  
11 December 2003 (11.12.2003)

Applicant

SONY CORPORATION et al

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

**2. Transmittal of the copy of the translation to the elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

EP, KR

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

US

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

**It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.**

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## PATENT COOPERATION TREATY



## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SK03PCT136	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/JP2003/015884	International filing date (day/month/year) 11 December 2003 (11.12.2003)	Priority date (day/month/year) 26 December 2002 (26.12.2002)	
International Patent Classification (IPC) or national classification and IPC H01Q 9/14, 9/16, H04B 1/40			
Applicant SONY CORPORATION			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <u>4</u> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Box No. I Basis of the report</li> <li><input type="checkbox"/> Box No. II Priority</li> <li><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li><input type="checkbox"/> Box No. IV Lack of unity of invention</li> <li><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li><input type="checkbox"/> Box No. VI Certain documents cited</li> <li><input type="checkbox"/> Box No. VII Certain defects in the international application</li> <li><input type="checkbox"/> Box No. VIII Certain observations on the international application</li> </ul>
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Date of submission of the demand 26 July 2004 (26.07.2004)	Date of completion of this report 18 January 2005 (18.01.2005)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/015884

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:

- international search (under Rules 12.3 and 23.1(b))
- publication of the international application (under Rule 12.4)
- international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

The international application as originally filed/furnished

the description:

pages \_\_\_\_\_ 1, 4-16 , as originally filed/furnished

pages\* \_\_\_\_\_ 2, 3, 3/1 received by this Authority on 05 November 2004 (05.11.2004)

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:

pages \_\_\_\_\_ 4, 5 , as originally filed/furnished

pages\* \_\_\_\_\_ , as amended (together with any statement) under Article 19

pages\* \_\_\_\_\_ 3, 6 received by this Authority on 05 November 2004 (05.11.2004)

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:

pages \_\_\_\_\_ 1-13 , as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

- the description, pages \_\_\_\_\_
- the claims, Nos. \_\_\_\_\_ 1, 2
- the drawings, sheets/figs \_\_\_\_\_
- the sequence listing (*specify*): \_\_\_\_\_
- any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages \_\_\_\_\_
- the claims, Nos. \_\_\_\_\_
- the drawings, sheets/figs \_\_\_\_\_
- the sequence listing (*specify*): \_\_\_\_\_
- any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP 03/15884

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	3 - 6	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	3 - 6	NO
Industrial applicability (IA)	Claims	3 - 6	YES
	Claims		NO

## 2. Citations and explanations

- Document 1: JP 2002-33676 A (Sony Corp.), 31 January 2002, paragraphs [0051] to [0055] and [0064], and fig. 4, 6 and 7, & EP 1176709 A2 & US 2002/21685 A
- Document 2: JP 2002-261533 A (Sony Corp.), 13 September 2002, entire text, all drawings, & WO 2002/071542 A1
- Document 3: JP 2000-106605 A (Denso Corp.), 11 April 2000, paragraphs [0018], [0020] and [0071], and fig. 3, & DE 19935232 A1
- Document 4: JP 2000-69107 A (Canon Inc.), 03 March 2000, paragraphs [0028] to [0030] and [0035], (Family: none)
- Document 5: JP 2002-232319 A (Fujitsu Ltd.), 16 August 2002, entire text, all drawings, (Family: none)
- Document 6: JP 2001-111448 A (Hitachi Int. Electric Inc.), 20 April 2001, entire text, all drawings, (Family: none)

The invention that is set forth in claims 3 and 6 does not involve an inventive step in the light of documents 1 and 2 cited in the international search report, and documents 3 and 4, which are newly cited in

the international preliminary examination report.

Document 1 discloses a wireless communication device for a wireless LAN system that is capable of conducting communication over two wireless frequency bands with different transmission speeds and different frequency bands, wherein in cases when radio waves that cause interference are encountered during communication, the wireless communication device detects for the interference and switches the communication channel to a channel with no interference by switching the antenna and the transmission/reception circuit.

In addition, document 2 discloses a wireless communication module which can be used in an electronic device that is capable of conducting communication over a plurality of frequency bands, wherein said wireless communication module comprises a wireless communication antenna with a plurality of resonance frequencies that can be selected by switching the state of the antenna element pattern by means of a plurality of MEMS switching elements.

In addition, the feature of reducing power consumption by switching to a lower transmission speed is well known, as disclosed in documents 3 and 4.

Consequently, it is considered to be easy for a person skilled in the art to conceive of configuring so that in the invention that is disclosed in document 1, the antenna module is configured in the manner that is disclosed in document 2, and the frequency band is switched to a lower frequency band in order to switch the transmission speed and thereby reduce power consumption, as disclosed in documents 3 and 4.

The invention that is set forth in claim 4 does not involve an inventive step in the light of documents 1, 2 and 5 cited in the international search report, and documents 3 and 4, which are newly cited in the

international preliminary examination report.

The feature of determining which frequency band to select from among two given frequency bands on the basis of pre-set operation modes is well known, as disclosed in document 1 (paragraph [0053]), document 5 (paragraph [0023]) and document 3 (paragraph [0071]).

The invention that is set forth in claims 5 and 6 does not involve an inventive step in the light of documents 1 and 2 cited in the international search report, and claims 3, 4 and 6, which are newly cited in the international preliminary examination report.

Document 1 (paragraph [0053]) discloses the feature of selecting the channel that exhibits the best transmission quality by sequentially switching between the frequencies of two channels, determining which channel suffers from the least interference on the basis of the bit error rate of the demodulated data or the like and then setting the channel in question as the communication channel. Furthermore, the feature of determining the reception state from the strength of the electric field or the like is well known, as disclosed in, for example, document 6; therefore, it is thought that a person skilled in the art could control the switching of the channels according to the strength of the electrical field in the invention that is disclosed in document 1, as appropriate, in the light of document 6.